Employment and the labour input in the Maltese economy

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EMPLOYMENT AND LABOUR INPUT IN THE MALTESE ECONOMY[1]

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Introduction

The only currently available data series on employment in Malta that covers a reasonably long period is compiled by the Employment and Training Corporation (ETC) on the basis of "engagement and termination of employment" forms collected from employers. For the purposes of economic analysis, this series suffers from inherent weaknesses. The ETC collects the information primarily to determine who is entitled to receive unemployment benefits. The series focuses on full-time gainfully occupied persons and does not capture part-time employment.

By contrast, *Labour Force Surveys* (LFS) carried out by the National Statistics Office (NSO) offer a more comprehensive picture of labour market developments as they include part-timers.[2] These surveys provide data that are more easily comparable with those of other countries, yet they only date back to May 2000.[3] Any assessment of employment in earlier periods must therefore rely on the ETC data series. There are no official data on full-time equivalent employment, which would be a more accurate measure of the contribution of labour to the productive process.[4]

An attempt to remedy these deficiencies was made in the *Central Bank of Malta Working Paper No. 1,* using the ETC time series together with recent LFS data. In this paper two data series were constructed.[5] The first, referred to as the 'new employment series', was based on a simple headcount of persons in full-time or part-time employment. Those with both a full-time and a part-time job were counted only once. The second, referred to as the 'labour input series', transformed the total number of part-timers (including those who also held a full-time job) into their full-time equivalent, using a conversion factor based on the average number of hours worked by part-timers relative to the full-time working week. The full-time equivalent part-timers were then added to the total number of full-timers to create a uniform series. This series can be used to determine important indicators like average wages and labour productivity.

Both series are highly dependent on a number of simplifying assumptions.[6] It was assumed that,

- the average part-timer works 49% of the full-time working week;
- full-timers do not work overtime;
- 50% of part-timers also have a full-time job;
- there is a constant relation between the ETC and the LFS series.

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1 This article draws partly on Grech (2003).

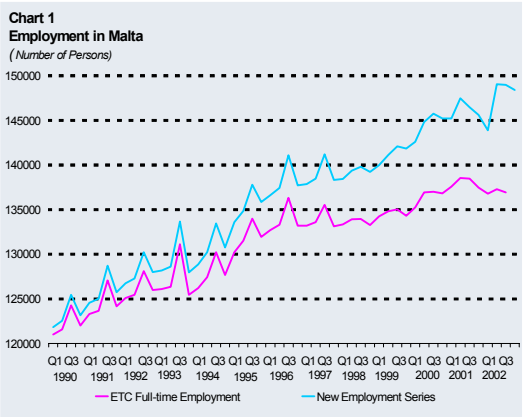
2 For a detailed comparison of LFS and ETC methodologies and concepts, see Central Bank of Malta (2001), pp. 17-19, Box 1.

3 For a discussion on the strengths and limitations of using administrative records, see Office for National Statistics (2000).

4 Full-time equivalent employment refers to the number of full-time working weeks used in production, taking both full-time and part-time jobs into account.

5 See Grech (2003).

6 *Ibid*.



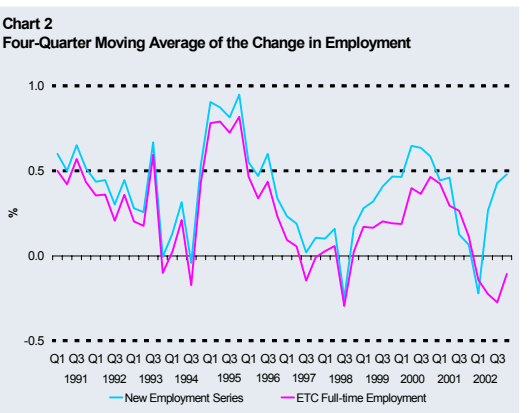
Assessing the New Employment Series

As expected, the inclusion of part-timers in the new employment series resulted in significantly higher numbers of employed persons than indicated in the ETC series, which only includes full-timers. Chart 1 illustrates how the two series increasingly diverge, reflecting the growing importance of part-timers in Malta's workforce, estimated to have grown from 2.5% of total employment in 1990 to 8.3% in 2002. This sharp rise is largely due to increased female participation in the labour market. Most women who participate in formal economic activity still prefer part-time employment, perhaps due to the persistence of social attitudes emphasising women's primary role as family carers together with a lack of childcare facilities. At the end of 2002 women constituted two-thirds of all part-time employees.[7]

Anecdotal evidence suggests that factors underlying the increase in part-time employment may have changed in recent years. A significant component of part-time employment traditionally consisted of housewives seeking to supplement the income of the main breadwinner, and students employed primarily in the tourism industry.[8]

The importance of this element may have diminished in recent years. Large firms in both the private and public sectors are increasingly contracting out ancillary operations like cleaning and catering - previously carried out by full-time employees - to firms employing part-timers. Favourable tax treatment of income from part-time employment has made it more attractive. While the 1995 *Census* indicated that just over 1,300 males were primarily employed as part-timers, the 2002 LFS showed that this number had risen to nearly 3,400.

The higher female participation rate and the shift in employment strategies and preferences together explain the marked discrepancy between the growth rates of full-time and part-time employment. Between 1998 and 2002, full-time employment expanded by a mere 2.5% while percentage growth in the part-time workforce was in double-digits. The rapid expansion of part-time employment can also be gauged from Chart 2, which shows that from 1991-2002 the new series nearly always grew at a faster pace than the ETC's full-time employment series.[9] Whereas over this



[7] Including full-timers working reduced hours. See National Statistics Office (2003), p. 8.
[8] The 1995 *Census* suggests that students and housewives comprised nearly 30% of the total part-time aggregate at the time.
[9] Four-quarter moving averages are used to smooth out seasonal fluctuations.

period the ETC's measure of full-time employment expanded by 0.9% on average, the new employment data series shows an average annual increase of 1.5%.

Chart 2 also indicates that from the third quarter of 2001 until the second quarter of 2002 the new series shows a worse performance than the full-time employment series of the ETC. This may be because firms initially reacted to the sharp downturn in economic activity in 2001 by reducing part-time staff while holding on to their full-time employees. When uncertainty about global economic conditions persisted, firms reduced their full-time labour complement but part-time employment increased sharply.

The new data series also gives a different picture of trends in the employment rate.[10] In 2002 this rate was unchanged from its 1990 level as calculated in the ETC's full-time employment series illustrated in Table 1. By contrast, the new series including part-time employment shows the rate rising from 56% in 1990 to 60% in 2002. This growth is in line with the trend seen in the EU-15 countries in recent years, where the employment rate rose by 4.3 percentage points between 1995 and 2002.

Yet despite significant growth in recent years, female participation in the Maltese labour market still remains low when compared to EU Member States.[11] Increased part-time work opportunities

Table 1
EMPLOYMENT RATES[1]

%

Year	Based on New Employment Series	Based on ETC Full-time Employment Series
1990	56.2	55.7
1991	56.7	56.0
1992	56.9	56.1
1993	56.9	55.9
1994	56.8	55.5
1995	58.1	56.6
1996	59.6	57.7
1997	59.3	57.2
1998	58.9	56.5
1999	59.2	56.4
2000	60.0	56.6
2001	59.9	56.6
2002 [2]	60.3	55.7

[1] Defined as the ratio of the total number of employed to the working age population (16-61 years).
[2] Working age population data for 2002 are Demographic Review estimates.

[10] Defined as the ratio of the employed to the working age population (16-61 age bracket).
[11] In 2000 the female employment rate in the EU-15 stood at 56%, compared to 35% in Malta. See National Statistics Office (2003) and Eurostat (2003).

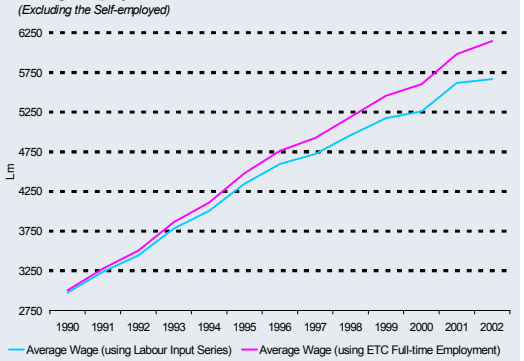
combined with flexible working conditions may result in a gradual convergence of the female participation rate in Malta and the European Union.

Implications of the Labour Input Series

The number of employed persons is not a very useful variable for measuring average labour income and productivity. The number of hours worked is far more relevant. The number of employed could remain relatively stable over time as firms adjust to business conditions by changing the level of utilisation of the existing work force, through cutting overtime, working reduced hours and similar measures.[12]

Data on hours worked in the Maltese economy are not published on a regular basis. The only published information is in the 1995 *Census*, which records part-time work at an average of approximately 19.6 hours per week, or 49% of the full-time working week. In the absence of more detailed data produced at regular intervals, the full-time equivalent employment or labour input series estimated on the basis of this information can – in a limited way - serve as an adequate proxy for the total number of hours worked.

Chart 3
Average Employment Income
(Excluding the Self-employed)



Using the ETC's full-time employment series to compute average labour income and productivity effectively attributes total employment income to full-timers only. This could give a significantly distorted picture. Chart 3 compares average employment income levels as computed on the basis of the labour input and the ETC series. In both cases the self-employed are excluded from the employment aggregate, as the National Accounts definition of employment income refers exclusively to the income of employees.[13] The annual employment income per full-time employee calculated on the basis of the full-time equivalent labour input series averaged around Lm5,600 in 2002, whereas the ETC's full-time employment series yielded an annual average remuneration of nearly Lm6,150.

These estimates were benchmarked against the periodic assessments of the average gross salary made in the LFS. For the data to be comparable, one must take into account that the employment income aggregate of the National Accounts on which the average salary is estimated includes social security contributions made by employers on behalf of their employees. The LFS aggregate is based on gross annual salary levels only. It is estimated that social security contributions made by employers amounted to approximately 8.1% of total employment income in 2002.[14] If this amount is excluded, the average gross salary received by workers computed on the basis of the full-time equivalent labour input series would stand at Lm5,180, an amount very close to the Lm5,000 average gross annual income shown by the LFS

[12] See European Central Bank (2003), p. 51, Box 8.
[13] See National Statistics Office (1999). The number of self-employed was taken from the breakdown of ETC full-time gainfully occupied data, and not from the LFS data, as the latter's reliability decreases when dealing with disaggregated categories. No measure of part-time self-employed was available and hence no similar adjustment to the estimated part-time aggregate could be made.
[14] See Grech (2003).

Table 2

COMPARING EMPLOYMENT AND PRODUCTIVITY GROWTH[1]

Year	Sources of GDP Growth	Based on Labour Input Series	Based on ETC Full-time Employment Series
1991	Labour input growth	2.2%	1.9%
	Labour productivity growth	4.1%	4.4%
1992	Labour input growth	1.6%	1.3%
	Labour productivity growth	3.1%	3.4%
1993	Labour input growth	1.2%	0.9%
	Labour productivity growth	3.0%	3.3%
1994	Labour input growth	0.9%	0.5%
	Labour productivity growth	2.1%	2.5%
1995	Labour input growth	3.6%	3.1%
	Labour productivity growth	5.7%	6.2%
1996	Labour input growth	2.0%	1.5%
	Labour productivity growth	2.0%	2.5%
1997	Labour input growth	0.5%	0.0%
	Labour productivity growth	4.3%	4.8%
1998	Labour input growth	0.2%	-0.2%
	Labour productivity growth	3.2%	3.6%
1999	Labour input growth	1.5%	0.7%
	Labour productivity growth	2.6%	3.4%
2000	Labour input growth	2.3%	1.5%
	Labour productivity growth	3.9%	4.9%
2001	Labour input growth	1.0%	1.1%
	Labour productivity growth	-2.2%	-2.3%
2002	Labour input growth	1.0%	-0.7%
	Labour productivity growth	-0.2%	1.9%

[1] Productivity growth is defined as the percentage change in the real GDP per worker (including the self-employed).

carried out during the same period. By contrast, the *Economic Survey* gives average earnings for the same year as Lm5,700.[15] This was probably computed on the basis of the number of full-time employees only.

Differences also arise when labour productivity is computed on the basis of real GDP per full-time employee. Computing productivity by taking only full-time workers into account inevitably results in a significant over-estimation of productivity growth. The full-time equivalent labour input series implies an average annual increase in labour productivity of 2.7% between 1990 and 2002, which is significantly lower than the 3.2% productivity growth obtained when productivity is computed on the basis of the full-time gainfully occupied series of the ETC.

[15] See Ministry for Economic Services (2002). The weekly salary in the *Economic Survey* was changed into an annual one.

The incorporation of data on part-time employment in employment statistics thus results in a different breakdown of the sources of GDP growth, that is, between the increase in the input of labour and improvements in labour productivity, as seen in Table 2. Malta's real GDP grew by an annual average of 4.2% between 1991 and 2002. The new estimates of full-time equivalent labour input indicate that 1.5 percentage points of this annual expansion were due to an increase in this input, while the remaining 2.7 percentage points were attributable to productivity gains. By contrast the ETC's full-time employment series implies that the importance of labour productivity as a source of economic growth, at 3.3 percentage points, was much more significant.

Conclusion

This paper attempts to assess more accurately the contribution of labour to the productive process in the Maltese economy. It shows that official labour market statistics provide only limited information on important new developments in this area, such as the recent sharp growth of part-time employment and variations in the number of hours worked. Accurate, timely and regular data on both these indicators are essential for a correct analysis of trends in the Maltese economy. In the absence of adequate data, a full-time equivalent data series was constructed, based on a number of assumptions, which incorporates, as far as possible, the contribution of part-time workers to the production process. As this series suggests a much sharper expansion in the number of jobs than the official data, this results in a downward reassessment of both average labour costs and productivity gains during the period.

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